

OXIDIZED BIOPROSTHETIC MATERIALS

Abstract of the Disclosure

A method for chemical fixation of tissues by exposing the tissue to a chemical
5 fixative agent, under oxidative conditions. The chemical fixative agents useable in this
method include aldehydes (e.g., formaldehyde, glutaraldehyde, dialdehyde starch),
isocyanates (e.g., hexamethylene diisocyanate) and certain polyepoxy compounds (e.g.,
DENACOL). The oxidative conditions may be provided by heating of a chemical fixative
solution that contains the crosslinking agent, in the presence of room air or oxygen.
10 Alternatively, the oxidative conditions may be provided by adding one or more oxidizing
chemicals (e.g., hydrogen peroxide or other peroxides, sodium periodate or other periodates,
diisocyanates, halogens, n-bromosuccinimide or other halogenated compounds,
permanganates, ozone, chromic acid, sulfuryl chloride, sulfoxides, selenoxides, etc.) to the
chemical fixative solution. Alternatively, the oxidative conditions may be provided by
15 irradiation (e.g., alpha, beta, ultraviolet, electron beam, gamma rays) of the fixative solution
in the presence of room air or oxygen.